1. Introduction to Leases

- **Definition**: A contract granting the lessee control over an identified asset for a period in exchange for payments. Control means:
  - Using the asset to generate benefits (e.g., revenue).
  - Deciding how the asset is used.
- **Components**:
  - **Identified Asset**: Specific asset (e.g., a particular vehicle); lessor can't substitute without permission.
  - **Lease Term**: Non-cancellable period + options to extend/terminate if likely.
  - **Lease Payments**: Fixed payments, variable payments tied to index/rate, residual guarantees, purchase options (if likely), termination penalties.
- **Exclusions**: Intangible assets, biological assets, inventory, assets under construction.
- **Exam Tip**: Identify **embedded leases** in service contracts (e.g., equipment use). No control = not a lease.

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2. Lease Classification (Lessee)

- **US GAAP (ASC 842)**:
  - Classify as **finance** or **operating** lease. **Finance lease** if **any one** of these criteria is met:

Criteria	Description	Guideline
1. Ownership Transfer	Ownership passes to lessee at lease end	Clear (e.g., title transfer)
2. Purchase Option	Lessee is likely to buy the asset	Bargain price
3. Lease Term	Covers most of asset's economic life	≥75%
4. Present Value	PV of payments + guarantees ≥ most of fair value	≥90%
5. Specialized Asset	No alternative use to lessor	Highly customized

  - **Operating Lease**: Meets none.
  - **Example (Question 23)**:
    - Lease A: Purchase option (criterion 2) → Finance.
    - Lease B: No criteria → Operating.
    - Lease C: Term + PV (criteria 3, 4) → Finance.
    - Lease D: PV (criterion 4) → Finance.
- **IFRS 16**: No lessee classification; all leases treated like finance leases on balance sheet (Question 19).
- **Exam Tip**: Memorize the five criteria. Questions may test one criterion (e.g., purchase option).

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3. Lessee Accounting under US GAAP

3.1 Initial Recognition

- **Right-of-Use (ROU) Asset**:
  - Formula: Lease liability + initial direct costs (e.g., fees) + payments at/before start − incentives (e.g., lessor discounts).
- **Lease Liability**:
  - Formula: PV of future payments, discounted at:
    - **Implicit Rate**: Rate equating PV of payments + residual to fair value + lessor costs (if known).
    - **Incremental Borrowing Rate (IBR)**: Rate lessee would pay to borrow (e.g., 6% in Question 20).
  - **Payments Included**:
    - Fixed payments (minus incentives).
    - Variable payments tied to index/rate.
    - Residual guarantees (expected amount).
    - Purchase options (if likely).
    - Termination penalties (if likely).
- **PV Calculation**:
  - **Annuity (Recurring Payments)**:
    $$PV_{\text{annuity}} = \text{Payment} \times \frac{1 - (1 + r)^{-n}}{r}$$
    - Example (Question 20): 4 payments of $18,000, 6%:
      $$PV = 18,000 \times \frac{1 - (1.06)^{-4}}{0.06} = 18,000 \times 3.4651 = 62,370$$
  - **Single Payment**:
    $$PV = \frac{\text{Amount}}{(1 + r)^n}$$

        - Example: $3,500 in 5 years, 6%:
          [
          PV = \frac{3,500}{1.06^5} = 3,500 \times 0.7473 = 2,615
          ]
    - **Exam Tip**: Use PV tables (e.g., 3.4651 for 4 years, 6%) or Excel: =PV(6%, 4, -1, 0, 0).
- **Example (Question 20)**:
    - 5-year finance lease: $18,000 initial payment (excluded), 4 future payments of $18,000, $3,500 purchase option (likely), IBR 6%.
    - Liability: (62,370 + 2,615 = 64,985).
    - ROU Asset: (64,985 + 18,000 = 82,985).
    - **Journal Entry**:
    - Dr. ROU Asset 82,985
    - Cr. Lease Liability 64,985
    - Cr. Cash 18,000
- **Example (Your Example)**:
    - 5-year lease, $30,000/year, first payment at start, IBR 6%.
    - PV (Years 2–5): (30,000 \times 3.4651 = 103,953).
    - ROU Asset: (103,953 + 30,000 = 133,953).
    - **Journal Entry**:
    - Dr. ROU Asset 133,953
    - Cr. Lease Liability 103,953
    - Cr. Cash 30,000

3.2 Subsequent Measurement

- **Finance Lease**:
    - **ROU Asset**: Amortize straight-line over lease term or useful life (if ownership transfers).
    - **Liability**: Reduce with payments (interest + principal).
    - **Expense**: Amortization + Interest (higher early).
    - **Example (Year 1, Question 20)**:
        - Interest: (64,985 \times 6% = 3,899).
        - Principal: (18,000 - 3,899 = 14,101).
        - New liability: (64,985 - 14,101 = 50,884).
        - Amortization: (82,985 \div 5 = 16,597).
        - **Journal Entry**:
        - Dr. Interest Expense 3,899
        - Dr. Lease Liability 14,101
        - Cr. Cash 18,000
        - Dr. Amortization Expense 16,597
        - Cr. ROU Asset 16,597
- **Operating Lease**:
    - **ROU Asset**: Adjusted for straight-line expense.
    - **Liability**: Reduced like finance lease.
    - **Expense**: Single straight-line amount.
- **Presentation**:
    - **Balance Sheet**: ROU asset (non-current), Lease liability (current/non-current).
    - **Income Statement**: Finance → Amortization + Interest; Operating → Lease expense.
    - **Cash Flows**:

Component	Classification
Principal (Finance)	Financing
Interest (Finance)	Operating
Variable Payments	Operating
Operating Lease Payments	Operating

3.3 Short-Term Leases

- **Exemption**: Leases ≤12 months (no purchase option) can skip ROU asset/liability; expense as incurred (Question 21).
    - Example: 3-month rental, no delivery by July 31 → No impact (Answer B).

3.4 Variable Lease Payments

- Index/rate-based: Include in liability at initial rate.
- Non-index (e.g., % of sales): Expense as incurred.

3.5 Impairment

- Use ASC 360: Test ROU asset if impairment signs exist.
- Record loss if carrying amount > recoverable amount.

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4. US GAAP vs. IFRS

Feature	US GAAP (ASC 842)	IFRS 16
Lessee Classification	Finance or Operating	Single model
Expense Recognition	Finance: Higher early Operating: Even	Usually even
ROU Measurement	Cost only	Cost or revaluation
Exemptions	Short-term (≤12 months)	Short-term + low-value (<$5,000)

- **Exam Tip**: IFRS's single model is key (Question 19, Answer C).

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5. Additional Topics

- **Modifications**: Reassess classification or remeasure liability.
- **Subleases**: Classify based on ROU asset.
- **Pitfalls**:
  - Including initial payments in PV (Questions 20, 24).
  - Ignoring purchase options (Question 20).
  - Assuming operating leases are off-balance sheet (Question 18).

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6. PV Simplified

- **Annuity**:
  [
  PV = \text{Payment} \times \frac{1 - (1 + r)^{-n}}{r}
  ]
  - Example: (18,000 \times 3.4651 = 62,370).
- **Single Payment**:
  [
  PV = \frac{\text{Amount}}{(1 + r)^n}
  ]
  - Example: (\frac{3,500}{1.06^5} = 2,615).
- **PV Table (6%, 1–5 years)**:

Years	PV $1	PV Annuity
1	0.9434	0.9434
2	0.8900	1.8334
3	0.8396	2.6730
4	0.7921	3.4651
5	0.7473	4.2124

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7. Exam Strategies

- **Study Time**: 10–15 hours.
- **Focus**: Classification, PV calculations, journal entries, GAAP vs. IFRS.
- **Resources**: IMA CSO, ASC 842, practice MCQs.
- **Calculator**: n=4, i=6, PMT=-1, FV=0 → 3.4651.

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8. Practice Questions

1. **Classification**: 5-year lease, 6-year asset life. Finance? (Answer: Yes, ≥75%.)
2. **PV**: 3-year lease, $10,000/year, IBR 5%, PV factor 2.7232. Liability? (Answer: $27,232.)
3. **Journal Entry**: Liability $50,000, initial payment $5,000. Initial entry? (Answer: Dr. ROU Asset 55,000, Cr. Liability 50,000, Cr. Cash 5,000.)